5.3 NICKELSON FARMS LINE

The Nickelson Farms Line may provide service to two of the potential participants in the probable study boundary: Nickelson Farms Water Company and Rodeo Flats Water Distribution. There are two segments that compose the Nickelson Farms Line. The first segment serves Nickelson Farms Water Company (see Mapbook "Nickelson Farms Line 1") and the second serves Rodeo Flats Water Distribution (see Mapbook "Nickelson Farms Line 2").

5.3.1 NICKELSON FARMS LINE 1

The proposed Nickelson Farms Line 1 has a tap only on the new Madison Parallel pipeline located at its intersection with Union Chapel Road. Nickelson Farms Line 1 provides water service from the regional system for Nickelson Farms Water Company and to Nickelson Farms Line 2 for Rodeo Flats Water Distribution.

A new package pump station would provide pressure from the Madison Parallel pipeline to the Regional System potential participants on the Nickelson Farms Line 1. The preliminarily sized 250 gpm East Gillette Pump Station would provide approximately 120 ft of Total Dynamic Head (TDH) to deliver water to the two potential participants downstream.

The alignment of Nickelson Farms Line 1 follows the existing Union Chapel Road. However, Campbell County is in the process of changing the alignment of the road in the vicinity of Union Chapel Road and Fairview Road. The alignment may need to be re-routed after the final alignment of Union Chapel Road is set. There is a possibility of adding an additional service connection on Nickelson Farms Line 1 for the Moore Court Subdivision. A tap and isolation valve has been provided for potential future service (see Mapbook "Nickelson Farms Line 1" Sheet 6).

NICKELSON FARMS WATER COMPANY

This system is located to the southeast of the City of Gillette. The Nickelson Farms Water Company provides water service to Nickelson Little Farms Subdivision. Nickelson Farms Water Company has individual water meters for its customers and they disinfect the groundwater using chlorine gas. An existing pump station provides service pressure from the storage tanks to the distribution system. They have collected water quality data that is available.

The returned inventory form provided the following information about Nickelson Farms Water Company. The system is an older system with an estimated age of over 25 years that serves only residential users. This system serves customers through gravity lines as well as

pressurized lines. Fire protection is provided with the system. The fees paid for the water received from this system also include costs for roads and other items. The water quality of this system is reported as good, with the only concern being system age. Table 23 presents the existing water system summary for Nickelson Farms Water Company from the inventory form (Appendix E). Figures 32 through 35 are photos of the existing pump station, tanks, and wells.

TABLE 23 NICKELSON FARMS WATER COMPANY EXISTING SYSTEM SUMMARY

Tank	**Volume (gallons)**	
1	68,000	
2	68,000	
3	36,000	
Well	**Production Rate (gpm)**	
1	80	
2	94	
Number of Existing Water Taps	**Number of Planned Future Water Taps**	
Not given	Not given	
Annual Water Usage (gallons)	**Peak Day Summer Usage (gallons)**	**Peak Day Winter Usage (gallons)**
19,000,000	143,419	14,161
Operating Pressure (psi)	**Optimum Operating Pressure (psi)**	
80-pressure, 30-60-gravity	Not Given	

FIGURE 32 **NICKELSON FARMS WATER COMPANY PUMP STATION**

FIGURE 33 **NICKELSON FARMS WATER COMPANY PUMP STATION AND TANKS**

FIGURE 34 **NICKELSON FARMS WATER COMPANY WELL #1**

FIGURE 35 **NICKELSON FARMS WATER COMPANY WELL #2**

The system may be connected to the future Madison Parallel by the Nickelson Farms Line (see Mapbook "Nickelson Farms Line 1" - Sheets 1 to 9). An 8-inch connection of approximately 7,800 ft of dedicated and 20,000 ft of shared waterlines would provide service to the Nickelson Farms Water Company by filling the existing storage tanks. The service connection may need to be shutdown during the winter for infrequent use and/or water quality reasons. A service isolation valve would be provided on the connection line and a standard master meter and altitude valve would be required. Table 24 summarizes the future connection requirements. The future class of service has been defined as Class E which would not provide fire protection to Nickelson Farms Water Company via the regional system because it must be pumped by the East Gillette Pump Station which would require additional fire pumps. Fire protection may continue to be provided via the existing storage tank and fire hydrants.

TABLE 24 NICKELSON FARMS WATER COMPANY FUTURE CONNECTION SUMMARY

Class of Service	
Interim:	**Future:**
Class D	Class E
Delivery Requirements	
Connection Size: 8-inch	
Average Day Demand:	**Peak Day Average Demand:**
40 gpm	170 gpm
Preferred Delivery Point	
Connection to:	**Estimated Pressure at Delivery Point:**
Existing Storage Tanks	50 psi (reduced by Altitude Valve into Tank)
Infrastructure Needs to Establish Connection	
Service isolation valve, standard master meter, altitude valve, and approximately 7,800 feet of dedicated 8-inch pipe.	

5.3.2 NICKELSON FARMS LINE 2

The proposed Nickelson Farms Line 2 uses the same tap from the new Madison Parallel pipeline as Nickelson Farms Line 1. Nickelson Farms Line 1 provides water service from the regional system to Nickelson Farms Line 2 for Rodeo Flats Water Distribution. The East Gillette Pump Station would also provide pressure to deliver water to the Rodeo Flats Water Distribution.

RODEO FLATS WATER DISTRIBUTION

This system is located to the southeast of the City. Graceland Improvement & Service District is part of Rodeo Flats Water Distribution. Rodeo Flats Water Distribution is a private water system that has individual water meters for its customers and they disinfect their water using chlorine gas. An existing pump station provides service pressure from the storage tank to the distribution system. They have collected water quality data that is available.

The returned inventory form provided the following information about Rodeo Flats Water Distribution System. The system is a new system in good condition with an age of 2 years that serves only residential users. The system currently has 32 taps and is growing with 24 more taps expected. Table 25 presents the existing water system summary for Rodeo Flats Water Distribution from the inventory form (Appendix E). Figures 36 through 38 are photos of the existing pump station, tank, and well.

TABLE 25 RODEO FLATS WATER DISTRIBUTION EXISTING SYSTEM SUMMARY

Tank	**Volume (gallons)**	
1	82,000	
Well	**Production Rate (gpm)**	
1	40	
Number of Existing Water Taps	**Number of Planned Future Water Taps**	
32	24	
Annual Water Usage (gallons)	**Peak Day Summer Usage (gallons)**	**Peak Day Winter Usage (gallons)**
1,204,000	6,633	250
Operating Pressure (psi)	**Optimum Operating Pressure (psi)**	
50	Not Given	

FIGURE 36 **RODEO FLATS WATER DISTIBUTION PUMP STATION**

FIGURE 37 **RODEO FLATS WATER DISTIBUTION TANK**

FIGURE 38 **RODEO FLATS WATER DISTIBUTION WELL**

The system may be connected to the future Madison Parallel by the Nickelson Farms Line (see Mapbooks "Nickelson Farms Line 1" - Sheets 1 to 8 and "Nickelson Farms Line 2" – Sheets 1 to 2). A 6-inch connection of approximately 5,850 ft of dedicated and 17,300 ft of shared waterlines would provide service to the Rodeo Flats Water Distribution by filling the existing storage tanks. The service connection may need to be shutdown during the winter for infrequent use and/or water quality reasons. A service isolation valve would be provided on the connection line and a standard master meter and altitude valve would be required. Table 26 summarizes the future connection requirements.

TABLE 26 RODEO FLATS WATER DISTRIBUTION FUTURE CONNECTION SUMMARY

Class of Service	
Interim:	**Future:**
Class D	Class E
Delivery Requirements	
Connection Size: 6-inch	
Average Day Demand:	**Peak Day Average Demand:**
20 gpm	50 gpm
Preferred Delivery Point	
Connection to:	**Estimated Pressure at Delivery Point:**
Existing Storage Tank	115 psi (reduced by Altitude Valve into Tank)
Infrastructure Needs to Establish Connection	
Service isolation valve, standard master meter, altitude valve, and approximately 5,850 feet of dedicated 6-inch pipe.	